

TOM JOHNSTON: Resume.

Education.

- B.A. University of Notre Dame. Philosophy and Fine Arts.
- M.A. Indiana University. Philosophy and Computer Science.
- Ph.D. University of Georgia. Philosophy – logic and formal languages.

Memberships.

- ACM – Association for Computing Machinery.
- IEEE – Institute of Electrical and Electronics Engineers. Active participant and voting member in the 1600.1 SUMO (Suggested Upper Merged Ontology) working group.

Summary of IT Experience.

- Business analysis, requirements definition, and database and systems design and architecture, specifically:
 - Requirements. An interactive approach to requirements clarification while working with a range of subject matter experts, from manufacturing plant shop-floor workers to PhD network planning operations researchers.
 - Design. Based on a design philosophy of implementing stable requirements in schemas, volatile requirements in code-driving and schema-interpreting metadata tables, and rules not in either category as stored procedures or application code.
 - Architecture. Using two principles. (a) in the communications layer, Service Oriented Architecture-lite (SOA); (b) in the data layer, hub-and-spoke (not point-to-point) with the conceptual ODS and Data Warehouse as the hub.
- Reverse-engineering. Process: (a) Reverse-engineer business requirements out of the legacy systems; (b) drop obsolete requirements; (c) forward-engineer the surviving requirements, plus any new ones, into a new design.
- Client/Server and mixed technologies. C++, MFC (Microsoft Foundation Classes). Brio, Cognos, Essbase. Snowflake and star schema designs for MOLAP data marts. DB2 UDB AIX. Teradata. ETL design for Informatica, AbInitio, PL/SQL. ASG Rochade.
- Applications. ODS, data warehouse, data mart and enterprise-level data modeling. Health insurance, telecommunications, manufacturing, others.
- IT management, project management. For teams of 5-15 members. CIO at Enterprise Network Applications, Inc.
- Warehouse architecture. Inmon, Kimball and hybrids.

Consultancy Work History.

October, 2006 – March, 2008. HCSC, Chicago, Illinois. (HCSC is the parent company of BCBS of Illinois, Texas, Oklahoma and New Mexico.)

Role: enterprise data architect.

- Researched the Zachman, TOGAF, DoD and FEAF (Federal Information Architecture) frameworks, and integrated them into a proprietary enterprise architecture framework.
- Took the lead role in writing the DRM (Data Reference Model document) for the data architecture.
- Developed a specific implementation of bi-temporal functionality for versioning policy data.
- Contributed to the RFP for a metadata management tool, evaluated vendor responses, and after acquiring ASG's Rochade metadata repository, helped in the initial stages of designing an enterprise metadata model.
- Wrote an extensive use case analysis to show how to manage a warehouse of data on persons who have different identifiers in different source systems.

July, 2005 – August, 2006. Matria Healthcare. Marietta, Georgia.

Role: chief data architect and enterprise data modeler.

- Designed a fully-normalized enterprise data model of clients, members, providers, managed care case histories, healthcare surveys, and the medical, pharmacy and laboratory claims which constitute the bulk of the transaction volume.
- Developed a data switch architecture to be the basis of an enterprise-wide systems reengineering effort, supporting contract-mediated service provision and consumption based on SOA principles.
- Developed a proof of concept prototype implementations of the claims portion of the enterprise model, on a DB2 UDB platform (DB2 UDB /AIX, release 8.1, on an 18 CPU, 72gb 595 platform).

May, 2005 – July, 2005. Flashpoint Energy, Inc. Atlanta, Georgia.

Role: business analyst, data architect and developer.

- Sole analyst, designer, architect and developer for a system to manage trading natural gas futures contracts, including price changes based on imports of industry trading sheets, with VBA-managed export/import interfaces with Excel.

Apr, 2005 – Dec, 2006. Saint Vincent de Paul Society. Atlanta, Georgia.

Role: business analyst, data architect and developer.

- Designed and developed a system for managing data on clients for our local conference of the Saint Vincent de Paul Society. This system maintains income, expense and needs information on clients and their families, and helps provide both direct Saint Vincent de Paul assistance and also referrals to other community agencies.
- Note: this is pro bono work as part of my stewardship responsibilities at our church. This was a stewardship contribution of approximately 200 total hours of professional time and expertise.

Jun, 2004 – Feb, 2005. Apr, 2003 – Jul, 2003. Printpack, Inc. Atlanta, Georgia.

Role: business analyst, enterprise data modeler and data architect.

- Created a full-attributed enterprise data model and enterprise data architecture, covering materials management and process management, job and materials standard costing,

Resume of: Dr. Tom Johnston

Contact at: tjohnston@MindfulData.com

September, 2008. Page 2.

- customer order, shipment and invoice management, and AR/AP/GL/Purchasing/Payroll/Personnel.
- Built and populated an OMG-compliant Metadata Repository.
- Defined a real-time data warehouse architecture incorporating elements from both the Kimball and Inmon architectures.
- Defined all ETL rules for populating the warehouse, including some rules complex enough to involve seven-way joins. Also developed a "logically-tight English" notation for recording those rules.
- Designed several fully integrated and dimensionally conformed star-schema data marts, with dimensional, reference and fact tables.

Dec, 2003 – Jun, 2004. Home Depot, Inc. Atlanta, Georgia.

Role: data modeler.

- Took the lead role in requirements definition, ETL specification, data modeling and design for a 100 terabyte plus inventory management data warehouse implemented on AIX/DB2 UDB. Design issues included use of MQT tables, MDC composite block index design, block index vs. RID trade-offs.

Sep, 2002 – Jan, 2003. Ahold, Inc. Greenville, SC.

Role: data modeler.

- Constructed a reverse-engineered and normalized point-of-sale data model for the world's third largest grocery retailer.
- Participated in ARTS (Association for Retail Technology Standards) compliance reviews for their enterprise data model.
- Led the effort to define requirements for their implementation of the Uniform Code Council's expansion of the UPC to 14 characters, and introduction of the Global Trade Identification Number (GTIN) and Global Location Number (GLN).

Jan, 2002 – Mar, 2002. General Electric Power Systems. Marietta, Georgia.

Role: business analyst, data modeler.

- Constructed a data model to represent informal organizational groups as well as the HR corporate organizational structure, to reconcile and map filled and projected job positions, and to associate employees and other workers with all job positions and all organizational groups.
- Wrote all ETL rules to populate the new HR data mart.

Mar – Jul, 2001. Ryder Transportation. Ann Arbor, MI; Fort Worth, TX.

Role: business analyst, data modeler.

- Constructed the data model for a warehouse for procurement, shipment planning and execution, and freight bill audit functions. This data warehouse reconciled and integrated domestic with international shipping data, for both LTL/LCL and TL/CL (less-than-truckload/containerload and truckload/containerload) shipments.

Sep, 2000 – Mar, 2001. HCA. Nashville, TN.

Role: business analyst, data modeler.

- Gathered and defined requirements, and constructed a data model for an inventory management data warehouse, for a major hospital chain. This database manages the flow of materials into and out of central and local stores, and matches purchase orders and payments to vendor contracts to check for over-billing.

Resume of: Dr. Tom Johnston

Contact at: tjohnston@MindfulData.com

September, 2008. Page 3.

- Participated in translating the logical design to a Teradata physical implementation.

Jul, 1999 – Aug, 2000. Bell South. Atlanta, Georgia.

Role: business analyst.

- Gathered business requirements and wrote the initial data model for a customer profitability data warehouse.
- Actively assisted user accounting experts in developing an activity-based cost accounting structure, and in extending both revenue and cost accounting structures to more accurately analyze customer profitability.

Mar, 1998 – Jul, 1999. Enterprise Network Applications, Inc. Atlanta, Georgia.

Role: Chief Architect, Chief Technology Officer and IT department head for a team of 15 developers.

- Led the design and development of an International Telecommunications Union (ITU) Telecommunications Management Network (TMN) 3100-series standards-compliant site, circuit and protocol layer configuration management system.
- Designed the data model for, and supervised construction of, this configuration management system.
- Installed system at our first beta customer site.

Jul, 1997 – Mar, 1998. Blue Cross Blue Shield of Alabama. Birmingham, AL.

Role: consulting data architect and data modeler.

- Reengineered the Subscriber database to link subscribers to new cafeteria-style benefits programs.
- Assisted in reengineering the Provider database.
- Assisted in reengineering the Claims database, using a metadata-driven approach to defining contract clauses.

Apr, 1997 – Jul, 1997. Bank of America. Charlotte, NC; Baltimore, MD.

Role: data architect and data modeler.

- Designed the logical and physical databases, and defined the ETL rules, for a multi-terabyte customer relationship management data warehouse.

Apr, 1996 – Mar, 1997. MCI. Dallas, TX, Colorado Springs, CO.

Role: data architect.

- Led the design of a configuration management data warehouse including representations of switches, multiplexers, outside plant conduit and cable, and the OC3 protocol layer.

Sep, 1994 – Jun, 1995. Mar, 1993 – Apr, 1993. MBNA America. Christiana, DW.

Role: management consultant, data architect, data modeler.

- Interviewed senior management, and wrote the Data Administration department's charter document, which included (a) definition of roles and responsibilities for IT technical positions, data stewardship and technology assessment roles, and (b) data management standards and data architecture principles and practices.
- Designed the database, system requirements and workflows for a system that uses monthly credit statements as a targeted marketing channel.
- Wrote the data model to supported a federated database architecture for the 1-800 help desk, integrating data from the Customer, Cardholder and Statement databases.

Resume of: Dr. Tom Johnston

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September, 2008. Page 4.

Aug, 1993 – Sep, 1994. Visa International. San Mateo, CA.

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- Interviewed senior management, and wrote the Data Administration department's charter document, which included (a) definition of roles and responsibilities for IT technical positions, data stewardship and technology assessment roles, and (b) data management standards and data architecture principles and practices.

1985 – 1992. Equifax, Inc. Atlanta, GA.

- As an employee of Equifax, chief architect of a proprietary high-performance data server for both on-line and batch clients. This data server was written in MVS assembler, and was the first system at Equifax to work “above the 16mg line”. It utilized MVS cross-memory communications (SRBs and program call / program transfer), direct manipulation of client region CICS task schedulers, and other operating system internals mechanisms. It supported an on-line transaction volume of 6 million CICS transactions per day, with an average of 8 I/Os per transaction, and nightly batch activity of approximately 30 million credit file loads/updates. This was with 1990 technology.
- Chief architect and project lead to add a unique and unchanging consumer identifier to all credit files.